ROITHNER LASERTECHNIK GmbH
WIEDNER HAUPTSTRASSE 76 1040 VIENNA AUSTRIA
TEL. +43 1 586 52 43 -0, FAX. -44, OFFICE@ROITHNER-LASER.COM

RLT1050M-500G

TECHNICAL DATA

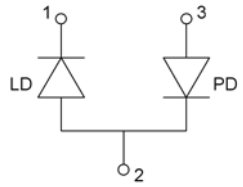
High Power Infrared Laser Diode

Features

- Lasing Mode Structure: multi mode
- Peak Wavelength : typ. 1050 nm
- Optical Ouput Power: 500 mW
- Package: 9 mm

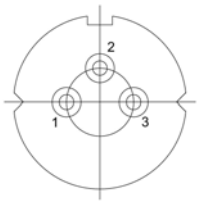
Electrical Connection

Pin Configuration	Bottom View



n-type

PIN	Function
1	LD Cathode
2	LD Anode, PD Cathode
3	PD Anode



Absolute Maximum Ratings (T_C=25°C)

Item	Symbol	Value	Unit
CW Output Power	P_O	550	mW
LD Reverse Voltage	$V_{R(LD)}$	1.5	V
PD Reverse Voltage	$V_{R(PD)}$	10	V
Operating Case Temperature	T_C	-20 … +35	°C
Storage Temperature	T_{stg}	-40 … +70	°C

Specifications (T_C=25°C)

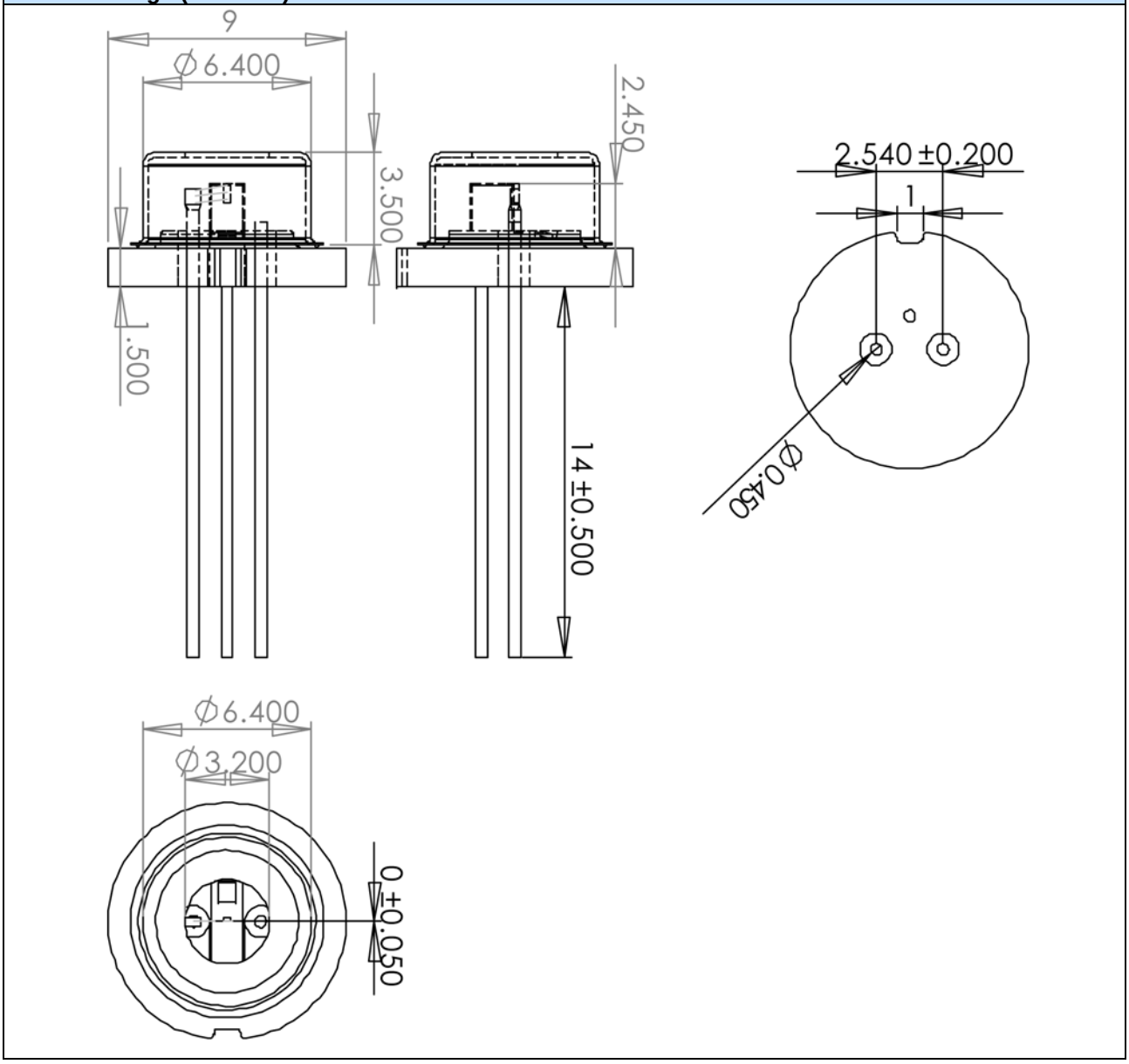
Item	Symbol	Min.	Typ.	Max.	Unit
Optical Specification					
CW Output Power	P_O	-	500	-	mW
Peak Wavelength	λ_P	-	1050	-	nm
Spectral Width (FWHM)	$\Delta\lambda$	1.6	1.7	1.8	nm
FWHM Beam Divergence	$\theta_{\parallel}$	-	10	-	deg
	$\theta_{\perp}$	-	30	-	deg
Emitting Aperature	W x H		100 x 1		µm
Electrical Specification					
Threshold Current	I_{th}	200	280	350	mA
Operating Current	I_{op}	860	890	910	A
Operating Voltage	U_{op}	-	1.7	1.8	V
Monitor Current	I_m	100	500	1500	µA
Operating Voltage	U_{op}	-	1.9	-	V

The above specifications are for reference purpose only and subjected to change without prior notice.

ROITHNER LASERTECHNIK GmbH
WIEDNER HAUPTSTRASSE 76 1040 VIENNA AUSTRIA
TEL. +43 1 586 52 43 -0, FAX. -44, OFFICE@ROITHNER-LASER.COM

Package Dimensons

9 mm Package (*Unit:mm*)



ROITHNER LASERTECHNIK GmbH
WIEDNER HAUPTSTRASSE 76 1040 VIENNA AUSTRIA
TEL. +43 1 586 52 43 -0, FAX. -44, OFFICE@ROITHNER-LASER.COM

Safety of Laser light

- Laser Light can damage the human eyes and skin. Do not expose the eye or skin directly to any laser light and/or through optical lens. When handling the LDs, wear appropriate safety glasses to prevent laser light, even any reflections from entering to the eye. Focused laser beam through optical instruments will increase the chance of eye hazard.
- ***Warning:*** Laser diode is emitting invisible light

Cautions

1. Operating methode

- This LD shall change its forward voltage requirement and optical ouput power according to temperature change. Also, the LD will require more operation current to maintain same ouput power as it degrades.
- Confirm that electrical spike current generated by switching on and off does not exceed the maximum operating current level specified herein above as absolute maximum rating. Also, employ appropriat countermeasures to reduce chattering and/or overshooting in the circuit.

2. Static Electricity

- Static electricity or electrical surges will reduce and degrade the reliability of the LDs. It is recommended to use a wrist trap or anti-electrostatic glove when handeling the product.

3. Absolute Maximum Rating

- Active layer of LDs shall have high current density and generate high electric field during its operation. In order to prevent excessive damage, the LD must be operated striclty below absolute maximum rating.